

## 2001 Chevrolet S10 Pickup

2001-03 TRANSFER CASES Removal & Installation - Blazer, Jimmy, Sonoma & S10 Pickup

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## APPLICATION

### TRANSFER CASE APPLICATION

| Application                        | Transfer Case Model (RPO Code) |
|------------------------------------|--------------------------------|
| Blazer, Jimmy, Sonoma & S10 Pickup |                                |
| 2-Speed Automatic                  | NVG 236 (NP8)                  |
| 2-Speed Selectable                 | NVG 233 (NP1)                  |

## REMOVAL & INSTALLATION

**WARNING:** Vehicle is equipped with Supplemental Inflatable Restraint (SIR) system. When servicing vehicle, use care to avoid accidental air bag deployment. SIR system-related components are located in various locations throughout interior and exterior of vehicle, depending on application. Do not use electrical test equipment on or near these circuits. If necessary, deactivate SIR system before servicing components. See appropriate AIR BAG DEACTIVATION PROCEDURES article in GENERAL INFORMATION.

**CAUTION:** When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have completed a relearn cycle. See COMPUTER RELEARN PROCEDURES article in GENERAL INFORMATION before disconnecting battery.

**CAUTION:** Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Fasteners requiring replacement or fasteners requiring the use of thread locking compound or sealant are identified in the service procedure. Do not use paints, lubricants, or corrosion inhibitors on fasteners or fastener joint surfaces unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems.

**TRANSFER CASE (NVG 233)****Removal**

1. Raise the vehicle.
2. Remove the transfer case shield and bolts from crossmember. See **Fig. 1** .
3. Remove the brace from the transfer case left side, if equipped. See **Fig. 2** .
4. Drain the transfer case of fluid. See appropriate SERVICING article.
5. Remove the front and rear drive shafts. See appropriate DRIVE SHAFTS & UNIVERSAL JOINTS article in DRIVELINE/AXLES.
6. Remove the motor/encoder electrical connector. See **Fig. 3** .
7. Remove the motor/encoder electrical wiring harness. See **Fig. 4** .
8. Remove the vacuum line for the transfer case vacuum switch.
9. Support the transmission with a suitable jack stand.
10. Remove the transmission mount retaining bolts. See **Fig. 5** .
11. Remove the transmission support assembly. See **REMOVAL & INSTALLATION - BLAZER, SONOMA & S10 PICKUP** in AUTOMATIC TRANSMISSIONS.
12. Remove the transmission mount (automatic transmission only). See **Fig. 6** .
13. Remove the transfer case adapter retaining nuts. See **Fig. 7** .

**NOTE:**        **The following service procedure should be performed with the aid of another technician.**

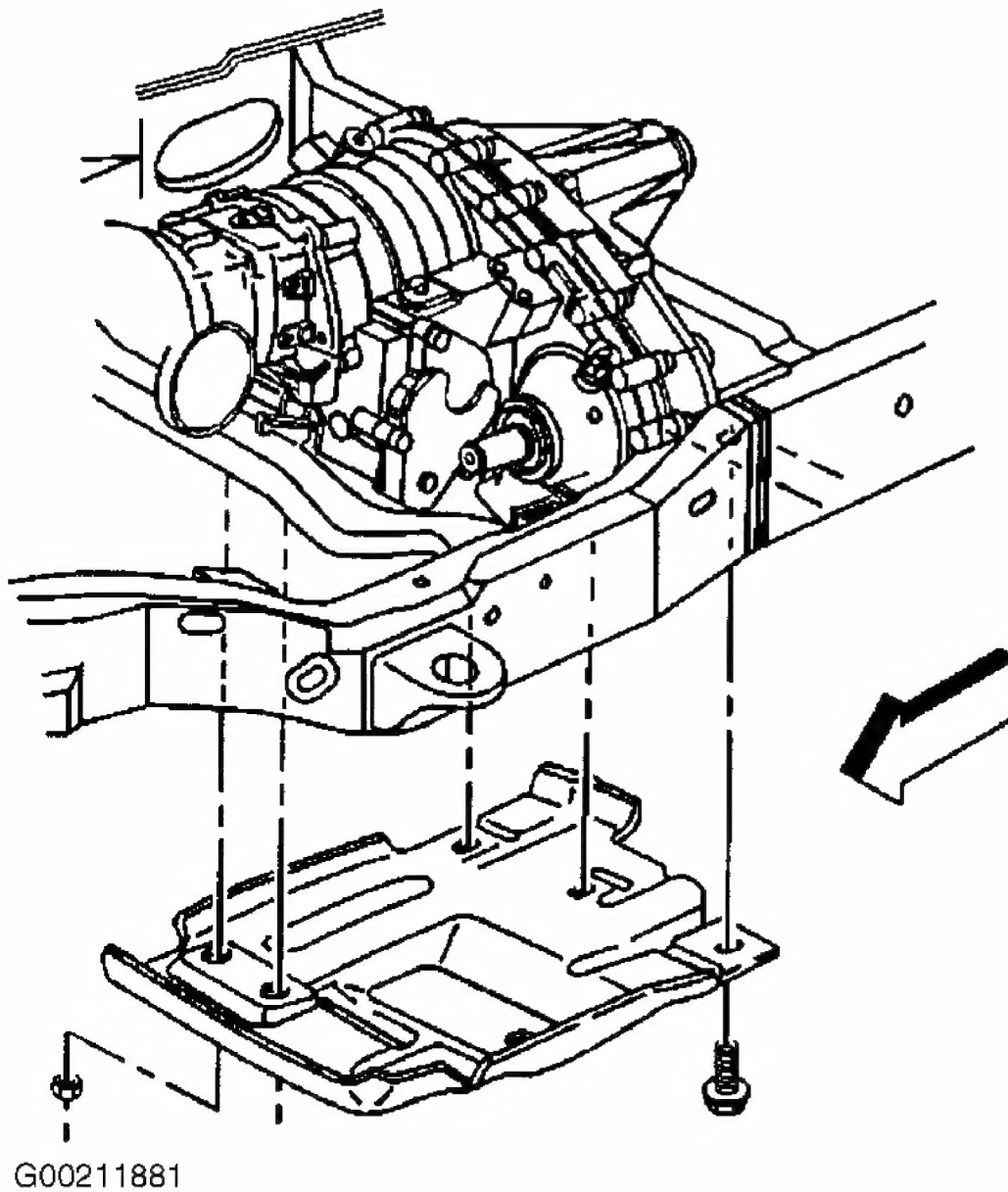
14. Remove the transfer case from the transfer case adapter straight back toward the rear of the vehicle.
15. Lower the front of the transfer case.
16. Raise the rear of the transfer case so that it is above the torsion bar bracket.
17. In a downward motion, remove the transfer case from the vehicle.

**CAUTION:** If during the removal of the transfer case the gasket becomes damaged, do not reuse the gasket. Replace the damaged gasket with a NEW one. DO NOT use any type of sealant in place of the gasket.

18. Remove the transfer case gasket. See **Fig. 8** .

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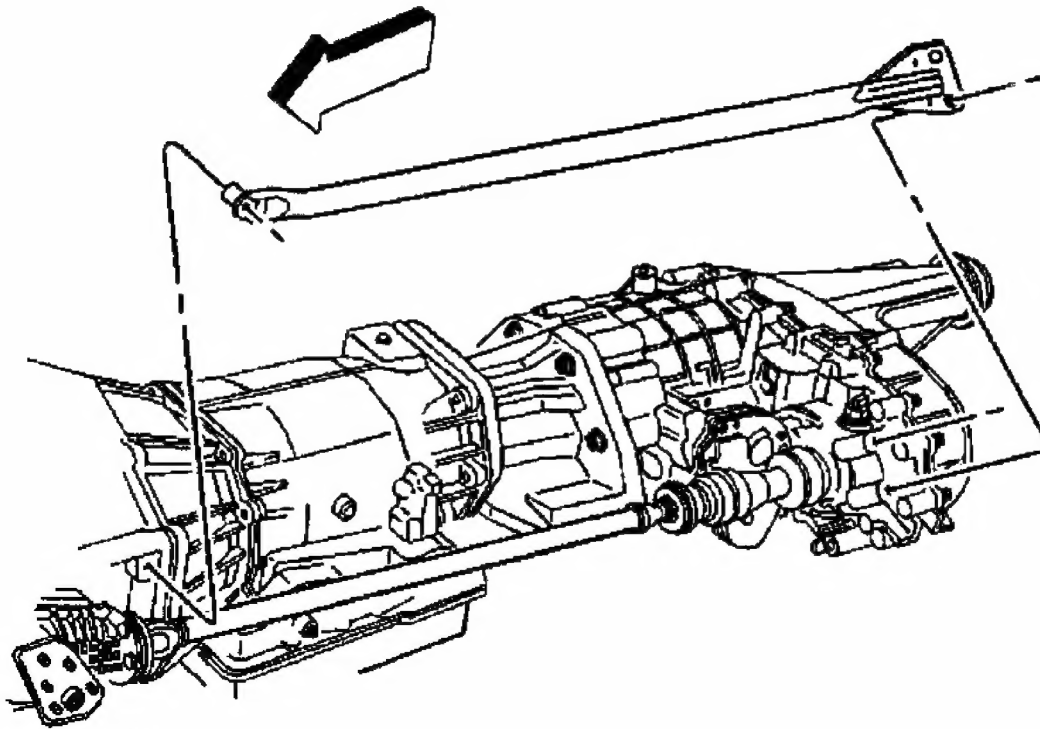
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**Fig. 1: Identifying Transfer Case Shield Mounting Bolts**  
Courtesy of GENERAL MOTORS CORP.

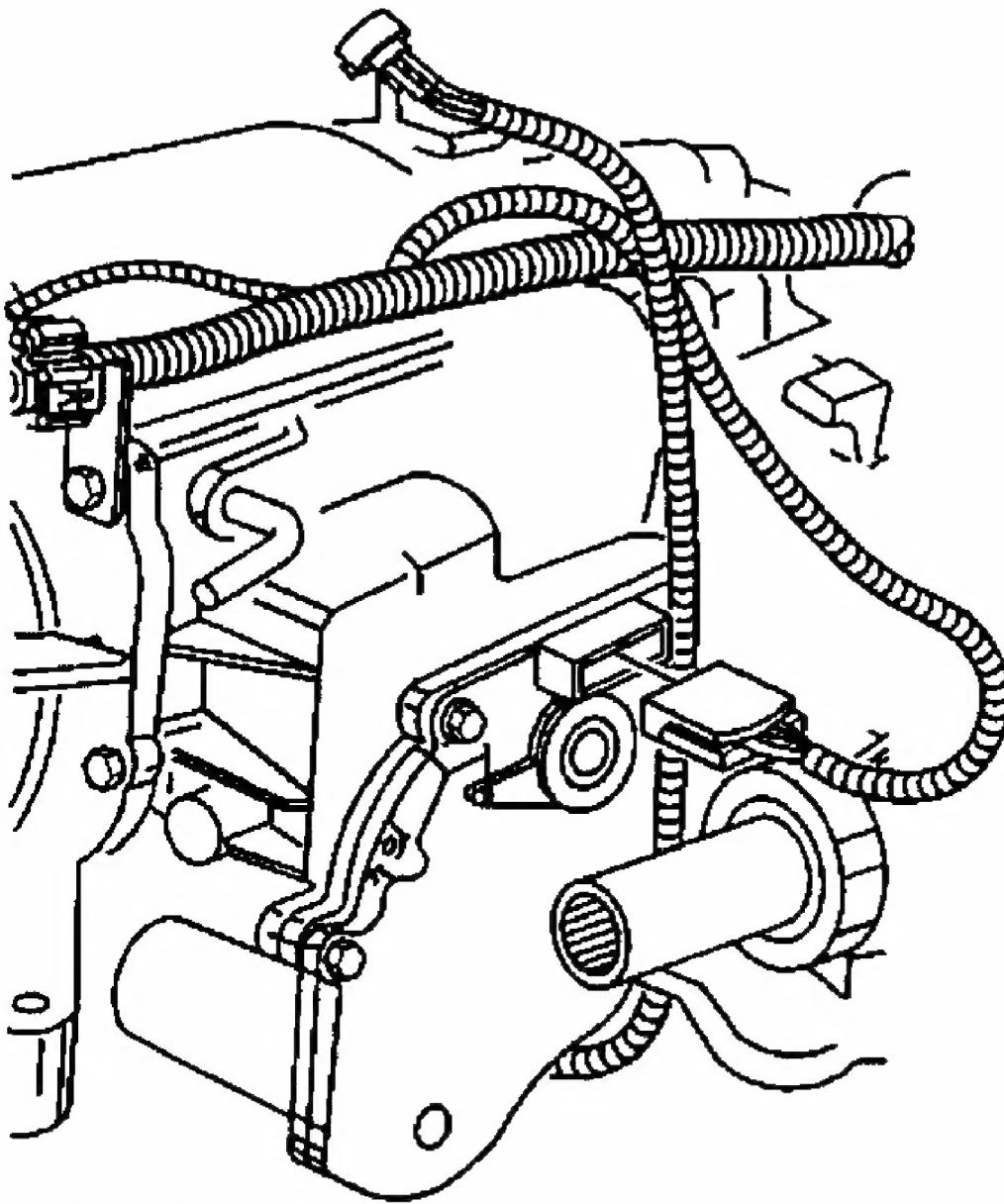
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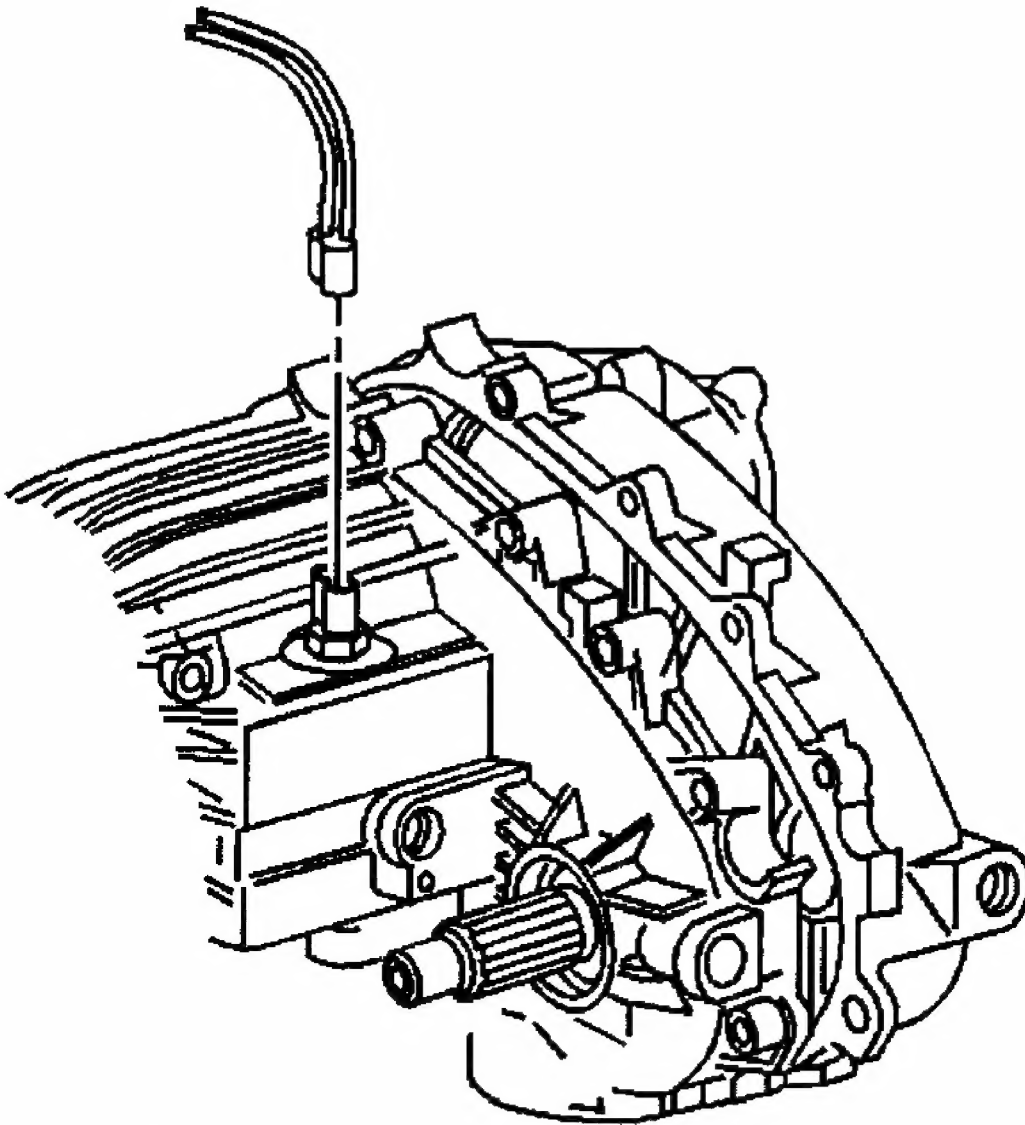
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**Fig. 2: Removing Transfer Brace**  
**Courtesy of GENERAL MOTORS CORP.**



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**Fig. 3: Removing Motor/Encoder Electrical Connector**  
Courtesy of GENERAL MOTORS CORP.

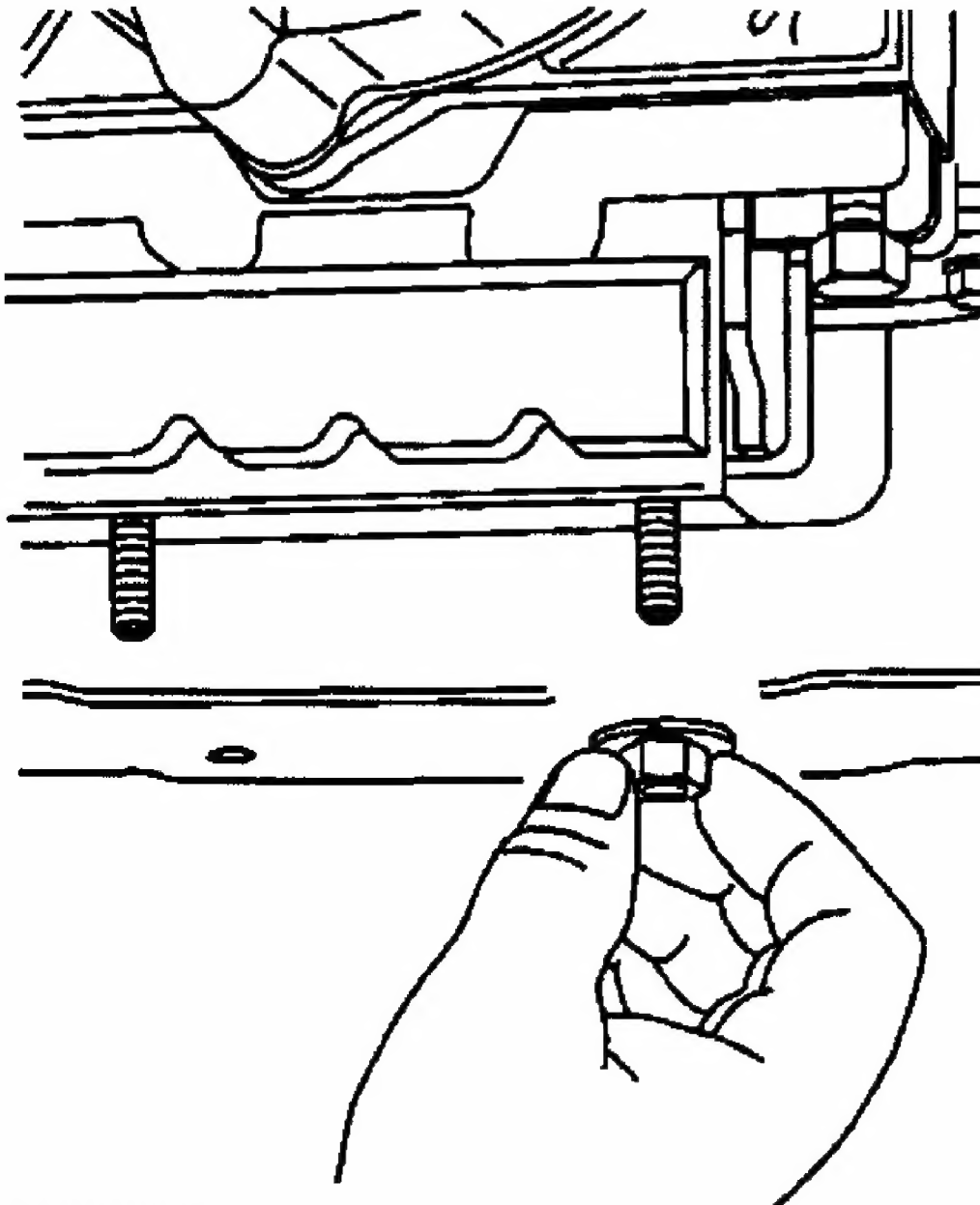


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**Fig. 4: Removing Motor/Encoder Electrical Wiring Harness**  
**Courtesy of GENERAL MOTORS CORP.**

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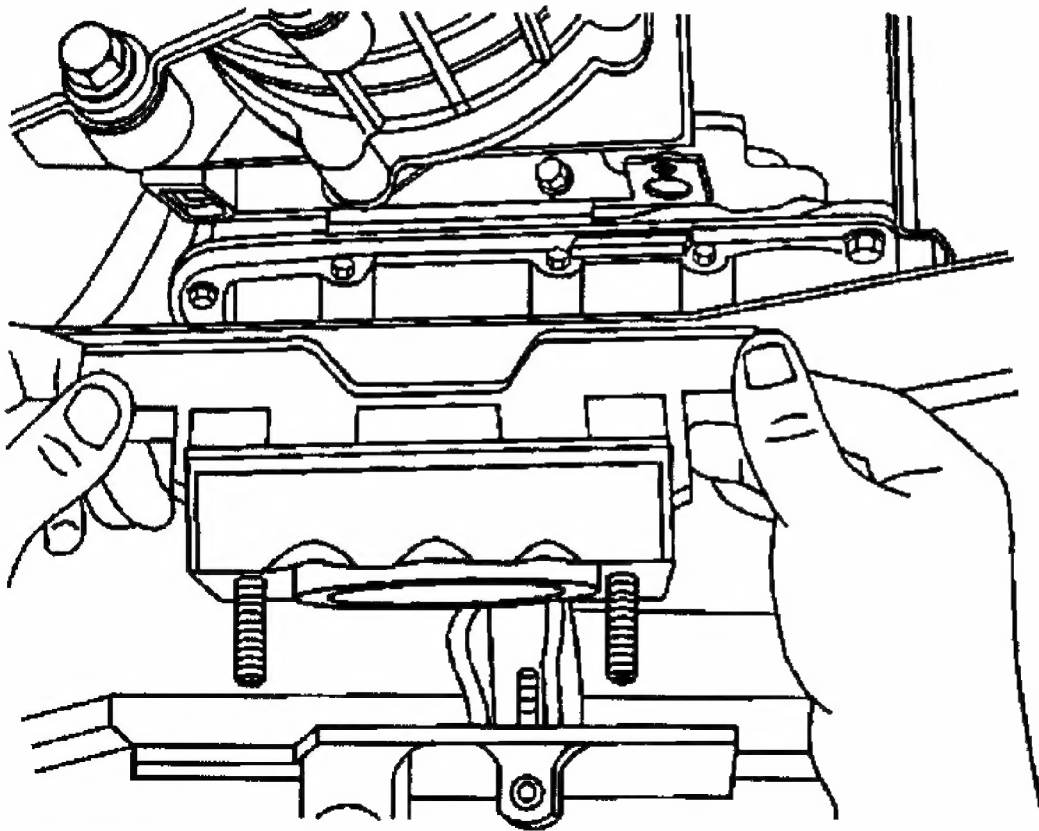


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**Fig. 5: Removing Transmission Mount Retaining Bolt**  
Courtesy of GENERAL MOTORS CORP.

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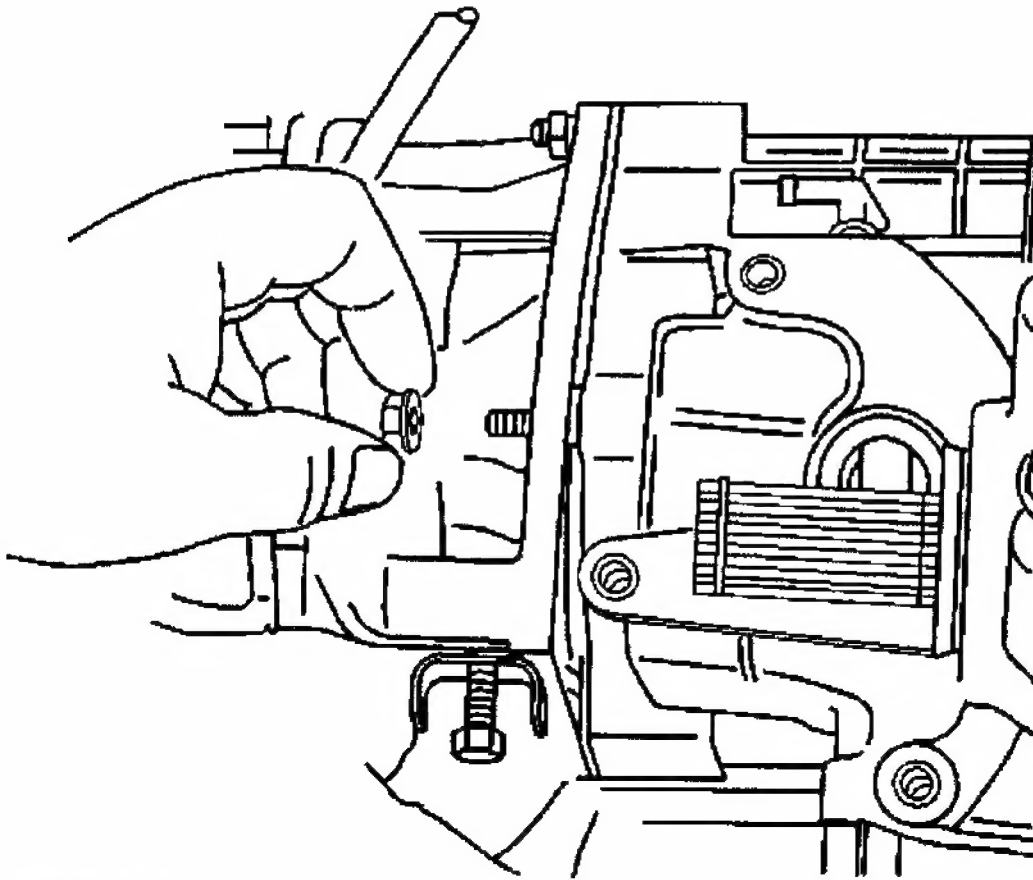
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**Fig. 6: Removing Automatic Transmission Mount**  
Courtesy of GENERAL MOTORS CORP.



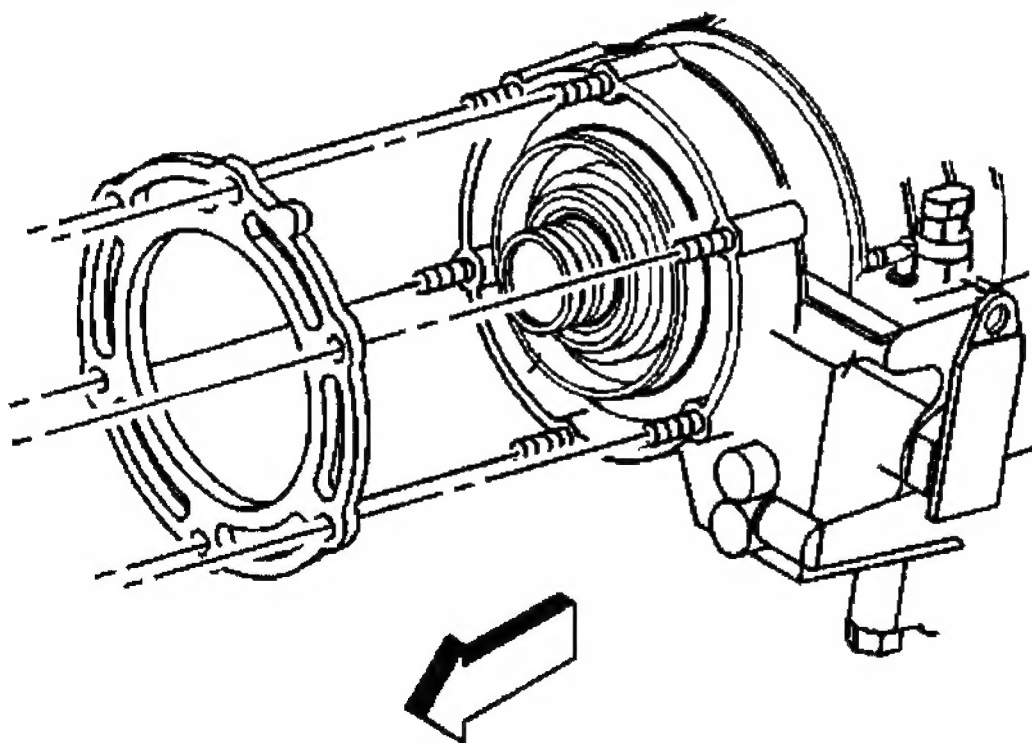
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**Fig. 7: Removing Transfer Case Adapter Retaining Nuts**  
Courtesy of GENERAL MOTORS CORP.



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**Fig. 8: Removing/Installing Transfer Case Gasket**  
Courtesy of GENERAL MOTORS CORP.

**Installation**

1. Install a new to the transfer case gasket, with the tab facing upward. See **Fig. 8** .

**NOTE:**      The following service procedure should be performed with the aid of another technician.

2. Install the transfer case assembly.
3. Install the transfer case retaining nuts. See **Fig. 7** . Tighten the transfer case retaining nuts to specification. See **TORQUE SPECIFICATIONS** .
4. Install the transmission mount. See **Fig. 6** . Tighten the transmission mount bolts to specification. See **TORQUE SPECIFICATIONS** .
5. Install the transmission support assembly. See **REMOVAL & INSTALLATION - BLAZER, SONOMA & S10 PICKUP** in AUTOMATIC TRANSMISSIONS.
6. Install the transmission mount retaining nuts. See **Fig. 5** . Tighten the transmission mount retaining nuts to specification. See **TORQUE SPECIFICATIONS** .
7. Remove the transmission jack from the transmission.

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8. Install the motor/encoder electrical connector. See **Fig. 3** .
9. Install the motor/encoder electrical wiring harness. See **Fig. 4** .
10. Install the vacuum line to the transfer case vacuum switch.
11. Install the transfer case brace on the left side, if equipped. See **Fig. 2** .
12. Install the transfer case brace bolt. Tighten the transfer case brace bolt to specification. See **TORQUE SPECIFICATIONS** .
13. Install the transfer case brace bolt at the engine. Tighten the transfer case brace to engine bolt to specification. See **TORQUE SPECIFICATIONS** .
14. Install the front and rear drive shafts. See DRIVE SHAFTS & UNIVERSAL JOINTS in appropriate DRIVELINE/AXLES article.
15. Fill the transfer case with appropriate fluid to proper level. See appropriate SERVICING article.
16. Install the transfer case shield. See **Fig. 1** . Tighten transfer case shield mounting bolts to specification. See **TORQUE SPECIFICATIONS** .
17. Lower the vehicle.

### TRANSFER CASE (NVG 236)

#### Removal

1. Raise the vehicle.
2. Remove the transfer case shield and bolts from the crossmember. See **Fig. 1** .
3. Remove the brace from the transfer case, if equipped. See **Fig. 2** .
4. Drain the transfer case of fluid. See appropriate SERVICING article.
5. Remove the front and rear drive shafts from the vehicle. See DRIVE SHAFTS & UNIVERSAL JOINTS in appropriate DRIVELINE/AXLES article.
6. Remove the motor/encoder electrical connector. See **Fig. 3** .
7. Remove the electrical wiring harness from the transfer case. See **Fig. 9** .
8. Remove the vent hose from the transfer case. See **Fig. 10** .
9. Support the transmission with a suitable jack stand.
10. Remove the transmission mount retaining bolts from the transmission support.
11. Remove the transmission support mounting bolts from the frame. See **Fig. 5** .
12. Remove the transmission support assembly. See **REMOVAL & INSTALLATION - BLAZER, SONOMA & S10 PICKUP** in AUTOMATIC TRANSMISSIONS.
13. Remove the transmission mount from the transfer case adapter (automatic transmission only). See **Fig. 6** .
14. Remove the transfer case to the transfer case adapter retaining nuts. See **Fig. 7** .

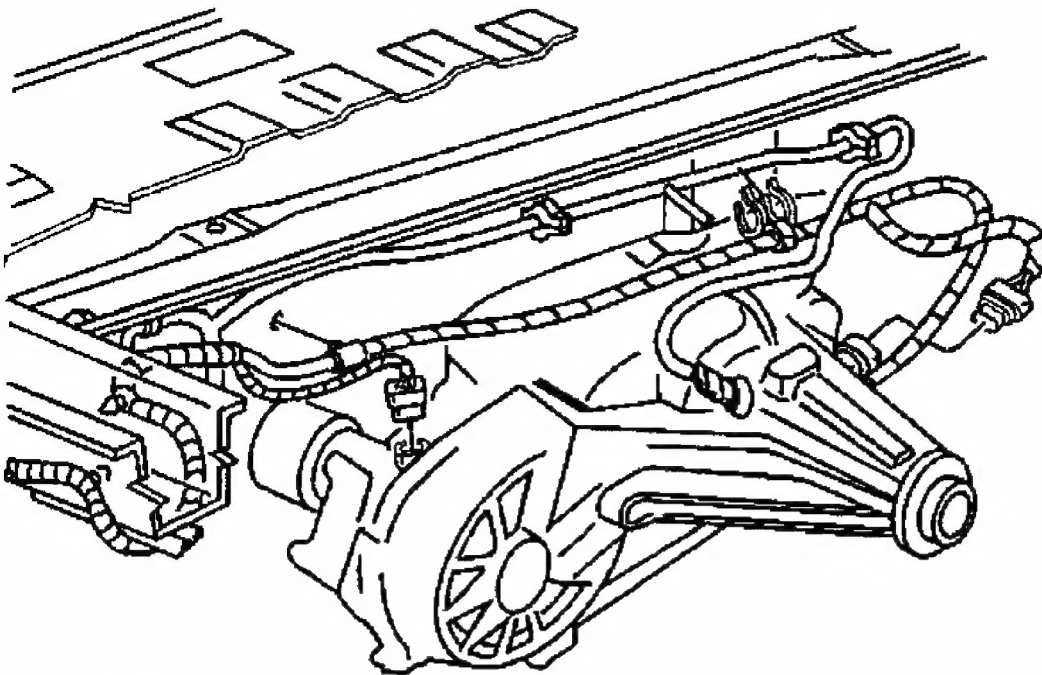
**NOTE:** The following service procedure should be performed with

**the aid of another technician.**

15. Remove the transfer case from the transfer case adapter straight back toward the rear of the vehicle.
16. Lower the front of the transfer case.
17. Raise the rear of the transfer case so that it is above the torsion bar bracket.
18. In a downward motion, remove the transfer case from the vehicle.

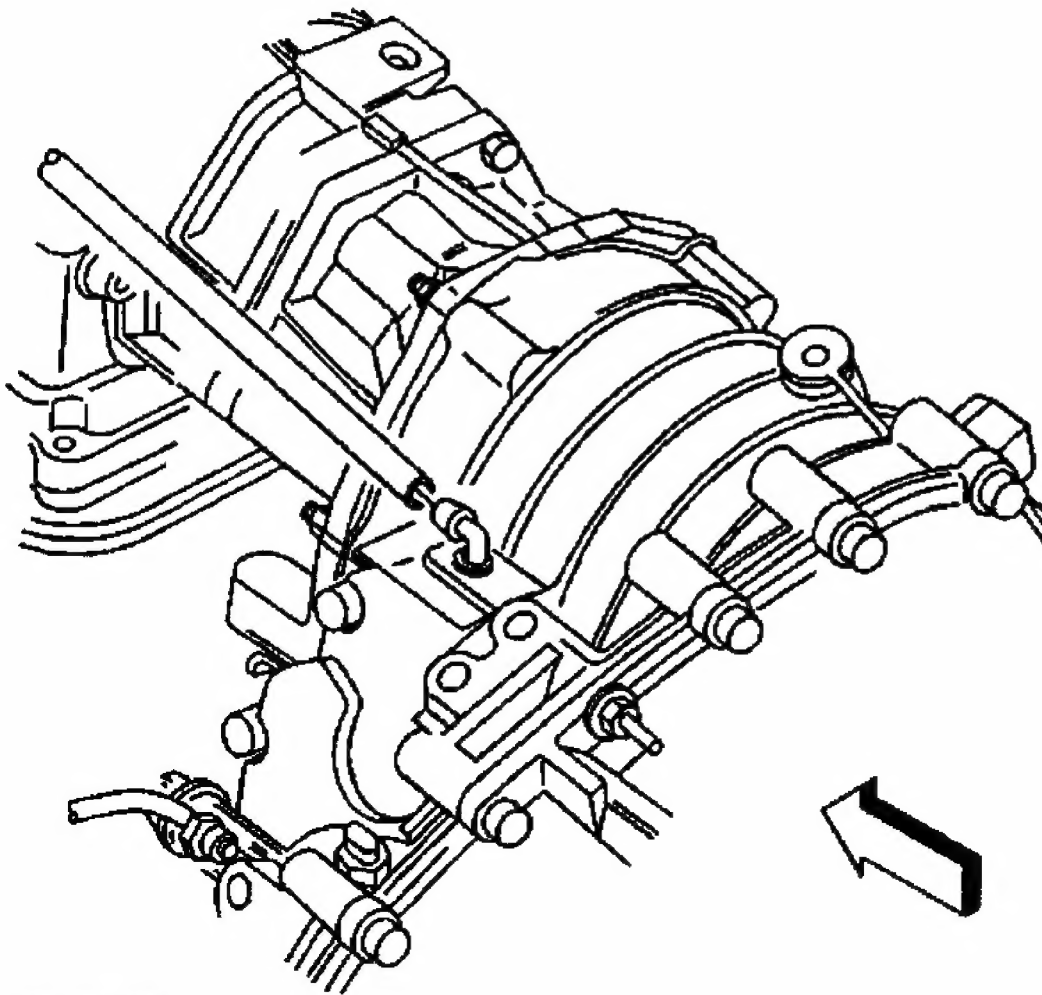
**CAUTION:** If during the removal of the transfer case the gasket becomes damaged, do not reuse the gasket. Replace the damaged gasket with a new one. DO NOT use any type of sealant in place of the gasket.

19. Remove the transfer case gasket. See **Fig. 8**.



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**Fig. 9: Removing Electrical Wiring Harness From Transfer Case**  
**Courtesy of GENERAL MOTORS CORP.**



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**Fig. 10: Removing Vent Hose From Transfer Case**  
Courtesy of GENERAL MOTORS CORP.

**Installation**

1. Install the new gasket to the transfer case adapter with the tab facing upward. See **Fig. 8**.

**NOTE:** The following service procedure should be performed with the aid of another technician.

2. Install the transfer case to the transfer case adapter.
3. Install the transfer case retaining nuts on the transfer case mounting studs. See **Fig. 7**. Tighten the transfer case retaining nuts to specification. See **TORQUE SPECIFICATIONS**.

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4. Install the transmission mount to the transfer case adapter. See **Fig. 6** . Tighten the transmission mount bolts to specification. See **TORQUE SPECIFICATIONS** .
5. Install the transmission support assembly. See **REMOVAL & INSTALLATION - BLAZER, SONOMA & S10 PICKUP** in AUTOMATIC TRANSMISSIONS.
6. Install the transmission mount retaining nuts. See **Fig. 5** . Tighten the transmission mount retaining nuts and bolts to specification. See **TORQUE SPECIFICATIONS** .
7. Remove the transmission jack from the transmission.
8. Install the motor/encoder electrical connector. See **Fig. 3** .
9. Install the electrical wiring harness to the transfer case. See **Fig. 9** .
10. Install the vent hose to the transfer case. See **Fig. 10** .
11. Install the transfer case brace on the left side, if equipped. See **Fig. 2** .
12. Install the transfer case brace bolts at the transfer case. Tighten the transfer case-to-engine bolts to specification. See **TORQUE SPECIFICATIONS** .
13. Install the transfer case brace bolt at the engine. Tighten the transfer case brace bolt to specification. See **TORQUE SPECIFICATIONS** .
14. Install the front and rear drive shafts in the vehicle. See DRIVE SHAFTS & UNIVERSAL JOINTS in appropriate DRIVELINE/AXLES article.
15. Fill the transfer case with appropriate fluid to proper level. See appropriate SERVICING article.
16. Install the transfer case shield to the vehicle. See **Fig. 1** . Tighten transfer case shield mounting bolts to specification. See **TORQUE SPECIFICATIONS** .
17. Lower the vehicle.

## TORQUE SPECIFICATIONS

### TORQUE SPECIFICATIONS

| Application                         | Ft. Lbs. (N.m) |
|-------------------------------------|----------------|
| Transfer Case Brace Bolt            | 44 (60)        |
| Transfer Case Brace-To-Engine Bolts | 35 (47)        |
| Transfer Case Retaining Nuts        | 40 (55)        |
| Transfer Case Shield Mounting Bolts | 24 (33)        |
| Transmission Mount Bolts            | 35 (47)        |
| Transmission Mount Retaining Nuts   |                |
| NVG 233                             | 35 (46)        |
| NVG 236                             | 30 (40)        |